



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,595	07/31/2001	Ashish K. Khandpur	56784US002	2530

32692 7590 01/21/2004

3M INNOVATIVE PROPERTIES COMPANY  
PO BOX 33427  
ST. PAUL, MN 55133-3427

EXAMINER

CHANG, VICTOR S

ART UNIT PAPER NUMBER

1771

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/919,595

Applicant(s)

KHANDPUR ET AL.

Examiner

Victor S Chang

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) 17-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendments and remarks filed on 9/23/2003. Applicant's amendment to claims 1 and cancellation of claim 12 have been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn.

### *Response to Amendment*

4. Claims 1-10,13,15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gehlsen et al. (US 6103152), substantially for the reasons set forth in section 3 of Paper No. 16, together with the following additional observations.

It is noted that newly amended claim 1 now recites in part "wherein the weight ratio of the polyarylene oxide polymer to styrenic blocks is between 0.05 to 5.0", and "a peel strength greater than 100 N/dm on polypropylene for an adhesive thickness of about 1.14 mm".

With respect to Applicant's response arguing that "Gehlsen does not teach that high cohesive strength and/or high modulus can be achieved without crosslinking or even with "light" crosslinking as suggested by the Examiner, and Gehlsen fails to describe any means for obtaining these properties without extensive crosslinking" (Remarks, page 7, first full paragraph), the Examiner repeats (see Paper No. 16, page

2) that Gehlsen expressly teaches that "In some cases, e.g., where high cohesive strength and/or high modulus is needed, the foam may be crosslinked" (column 2, lines 5-7). As such, Gehlsen clearly teaches that crosslinking is an optional method to improve the cohesive strength and/or modulus, and it would have been obvious to one of ordinary skill in the adhesive art to lightly crosslink the adhesive article to a suitable degree (i.e., a low gel content), since high crosslinking density (i.e., high gel content) would be inherently detrimental to its pressure sensitive adhesive properties. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

With respect to Applicant's argument that "Gehlsen describes foams that are crosslinked with high shear strength, and foams that are non-crosslinked with low shear strength, but Gehlsen does not describe a foam which is substantially non-crosslinked yet has high shear strength" (Remarks, page 7, second full paragraph), the Examiner notes that Applicant's argument is not persuasive since it assumes that an anticipation rejection, not an obviousness rejection, has been made. It should be noted that the properties of the instantly claimed invention are believed to be an obvious optimization as set forth above.

Applicant's arguments that claim 1 has been amended to recite "a specific range of weight ratios of polyarylene oxide polymer to styrenic blocks. There is nothing in Gehlsen that teaches or suggests this ratio range" (Remarks, page 8, first full paragraph), and there is nothing in Gehlsen to suggest that PPO and block copolymers of styrene should be mixed in the ratio range recited in claim 1 (Remarks, page 8,

second full paragraph) have been fully considered, but are not persuasive, because Applicant argues the previously cited references individually. In response to Applicant's arguments, the Examiner notes that the newly recited weight ratio of the polyarylene oxide polymer to styrenic blocks of between 0.05 to 5.0 is clearly a very broad range, and the Examiner again repeats (see section 5 of Paper No. 11) that it is old and well known that the alloy of styrenic block copolymer and polyphenylene oxide polymer provides improved high temperature performance, and it is believed that the blending suitable amount of styrenic block copolymer and polyphenylene oxide polymer to form a suitable polymer alloy is either inherently disclosed by Gehlsen or an obvious selection of the materials, as evidenced by the state of the art Hansen (US 4104323) which expressly teaches that melt blending of a polyphenylene ether resin and a styrene-diene block copolymer forms adhesive compositions with improved high temperature performance characteristics. It should be noted that one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references.

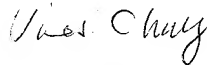
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Application/Control Number: 09/919,595  
Art Unit: 1771

Page 5

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0994.



Victor S Chang  
Examiner  
Art Unit 1771